

*APR 10*

detected signal; a microcomputer 20 for outputting a control signal in accordance with manipulation of a user; a TP analyzer 13 for analyzing a TP signal in the digital broadcasting signal output from the A/D converter 11 to detect audio/video signals under the control of the microcomputer 20; an MPEG audio decoder 24 for decoding the audio signal analyzed in the TP analyzer 13; an MPEG video decoder 25 for decoding the video signal analyzed in the TP analyzer 13; a digital to analog converter (DAC) 30 for converting the digital audio signal decoded by the MPEG audio decoder 24 into an analog signal; a flash ROM (read only memory) 40 where channels and programs are stored; a RAM 41 where temporary data is stored by the operation of the microcomputer 20; and an NTSC encoder 31 for converting the video signal decoded by the MPEG video decoder 25 into an image signal which is displayed on a TV or monitor. Further, an SDRAM 23 is necessary for data processing in the MPEG audio decoder 24 and the MPEG video decoder 25, and a user interface 21 and a CAS interface 22 are necessary for generating an external operation signal for the microcomputer 20.--

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*✓*

Please replace the paragraph beginning on page 2, line 10, with the following rewritten paragraph:

*A7*

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--Generally, the digital broadcasting processes the video signal and the audio signal under the MPEG standard. Particularly, the MPEG standard

*KD  
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number for the broadcasting system is ISO/IEC 13818-1, the standard for the video signal is ISO/IEC 13818-2, and the standard for the audio signal is ISO/IEC 13818-3. However, the digital TV receiver in the U.S.A. does not use the audio signal under the MPEG system, and processes it under the standard of DOLBY AC-3.--

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Please replace the paragraph beginning on page 2, line 25, with the following rewritten paragraph:

*AM*

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--The channel decoder 12 detects the pilot signal in the intermediate frequency signal to detect the baseband signal and converts the baseband signal into a digital signal. Next, it performs a timing recovery corresponding to symbol rate and then performs the error correction. The output signal of the channel decoder 12 is a transport stream packet type signal sequence in a byte unit.--

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Please replace the paragraph beginning on page 3, line 7, with the following rewritten paragraph:

*KU*

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--The transport signal sequence, which is standardized in the MPEG-2 system, is a time-multiplexed signal sequence, which is called "transport stream packet". The transport signal sequence contains a header on which a packet identifier (PID) number is recorded, on the starting of the packet. The

*A4  
Cmtk*

PID number is utilized as the information with which the time-multiplexed signal is demultiplexed. Also, the PID number indicates the type of current packet, and if the PID number is analyzed, it is detected whether the current packet is a video packet, an audio packet, or program specific information. Particularly, the digital TV standard in the U.S.A. includes program specific information, that is, program and system information protocol (hereinafter, referred to as 'PSIP').--

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Please replace the paragraph beginning on page 3, line 20, with the following rewritten paragraph:

*A5*

--The PSIP includes a master guide table (MGT) where the versions of all the broadcasting program tables are controlled, a terrestrial virtual channel table (TVCT) where the information for channels is stored, a rating region table (RRT) where a rating table of each program is listed, an event information table (EIT) for providing the information on the current broadcasting programs and future broadcasting programs, an extended text table (ETT) for providing detailed information on the current broadcasting programs and future broadcasting programs, and a system time table (STT) for sending current time.--

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Please replace the paragraph beginning on page 4, line 5, with the following rewritten paragraph:

*AC*  
--The video and audio standards in the MPEG-2 system are in connection with the signal sequences of the compressed video and audio. Under the MPEG-2 standard, the video signal, the audio signal and the program specific information are all time-multiplexed and transmitted in several transport stream packets. The signal sequences thereof are all discriminated with the PID number.--

*AN*  
Please replace the paragraph beginning on page 4, line 24, with the following rewritten paragraph:

--The MPEG video decoder 25 decodes the video signal sequence applied from the TP analyzer 13 and outputs the decoded result to the NTSC encoder 31. The video signal sequence applied from the TP analyzer 13 is the compressed data in the MPEG-2 system. Therefore, the MPEG video decoder 25 decompresses the video signal sequence to restore it to original digital video data.--

Please replace the paragraph beginning on page 5, line 5, with the following rewritten paragraph:

*AS*  
--The MPEG audio decoder 24 decodes the audio signal sequence applied from the TP analyzer 13 and outputs the decoded result to the DAC 30. The audio signal sequence applied from the TP analyzer 13 is the compressed data in the MPEG-1 system. Therefore, the MPEG audio decoder 24 decompresses the audio signal sequence to restore it to original digital audio data.--

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*AO*  
Please replace the paragraph beginning on page 6, line 10, with the following rewritten paragraph:

--Fig. 2 shows an electronic program guide (EPG) of the program specific information of the GUI type. Referring to Fig. 2, a menu screen 50 includes icons 51 and characters 52 explaining the icons. Most programmers who produce an EPG, produce a menu based on a full screen as shown in Fig. 2.--

*AO*  
Please replace the paragraph beginning on page 6, line 17, with the following rewritten paragraph:

*AO*  
--Referring to Fig. 3, in the EPG displayed in the related art digital TV, when the viewer selects a double window mode for simultaneously displaying a broadcasting program screen 60 and an EPG screen 50', a width of the EPG program screen 50' becomes smaller. As a result, widths of the characters and icons become smaller, thereby causing the viewer difficulty in discriminating the characters 52' and icons 51'.--

Please replace the paragraph beginning on page 6, line 24, with the  
following rewritten paragraph:

*A/1*  
--Furthermore, if the icons are displayed with a menu window 50" of a picture in picture (PIP) mode as shown in Fig. 4, characters 52" and icons 51" have smaller widths and lengths, thereby making it difficult for the viewer to discriminate meanings of the characters and icons. Particularly, it is difficult to discriminate meanings of the characters seriously scaled down in their size while meaning of the icons may be discriminated by the viewer to some extent regardless of the double window mode and the PIP mode.--

*A/2*  
Please replace the paragraph beginning on page 10, line 18, with the  
following rewritten paragraph:

*A/2*  
--If the user selects a screen mode of the TV as a double window mode in step S110, the display area of the TV is divided into a first screen and a second screen having almost the same size in step S120.--

*A/3*  
Please replace the paragraph beginning on page 11, line 19, with the  
following rewritten paragraph:

*A/3*  
--If discrimination is reduced as the size of the reduced characters is seriously smaller than the default size, it is difficult for the viewer to

A13  
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discriminate the elements of the menu. To avoid this, the size of the reduced characters is again expanded to the size which is to be discriminated by the viewer. The expansion rate of the reduced characters is set at a value less than a reciprocal number of the reduction rate of characters. For example, if the size of the characters has been reduced at a size of 50% ( $1/2$ ) of the default size, the expansion rate is set at a reciprocal number of 50%, i.e., 2 or less. That is, if it is difficult to discriminate characters as the size of the reduced characters is reduced at the size of 50% of the default size, the size of the reduced characters is again expanded at a size less than double size. After all, in step S500, the characters of the menu are displayed at a size less than the original size, i.e., the default size.--

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Please replace the paragraph beginning on page 13, line 18, with the following rewritten paragraph:

A14

--If discrimination is reduced as the size of the reduced characters is seriously smaller than the default size, it is difficult for the viewer to discriminate the elements of the menu. To avoid this, the size of the reduced characters is again expanded to the size which is to be discriminated by the viewer. The expansion rate of the reduced characters is set at a value less than a reciprocal number of the reduction rate of characters. For example, if the size of the characters has been reduced at a size of 25% ( $1/4$ ) of the default size,

*AB*  
*CHX*

the expansion rate is set at a reciprocal number of 25%, i.e., 4 or less. That is, if it is difficult to discriminate characters as the size of the reduced characters is reduced at the size of 25% of the default size, the size of the reduced characters is again expanded at a size less than quadruple size. After all, characters of the menu are displayed at a size less than the original size, i.e., the default size.--

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Please replace the paragraph beginning on page 14, line 8, with the following rewritten paragraph:

*AB*

--If the characters of the menu are maintained at the original size at the state that the menu display area is reduced at 25% of the display area of the TV, all of the characters may not be displayed on the menu display area. Particularly, if the width of the character of the menu is reduced less than 50% (1/2) of the original width thereof, respective elements of the menu may overlap each other. In that case, in the present invention, all of the characters of the selected element are not displayed, but some menu is displayed with maintaining the size of the character at a size to be discriminated by the viewer. Also, in step S500 of the present invention, a menu of a new size is displayed by manipulating a key of the TV so that each element of the menu is scrolled on the menu display area.--

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